Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

INDEX TO VOLUME 31

New names, and the final members of new combinations, are in **bold-face type.**

Abortiporus, 421, 427, **distortus,** 422
Abutilon Abutilon, 154, 157, Avicennae, 154
Acacia Greggii, 436
Acer dasycarpum, 143, Negundo, 143, pennsylvanicum, 144, rubrum, 131, 135, 143, 145, 149, 155, saccharinum, 143, saccharum, 143
Achillea Millefolium, 152, 156
Acorus Calamus, 135, 140
Acosta conostega, 321
Acrista, 350, 351, 353, monticola, 353, 354
Acristeae, 352
Acrolasia albicaulis, 566, 567, compacta, 566, ctenophora, 567, **gracilis,** 566, 567, integrifolia, 566, 567, **latifolia,** 567
Actaea alba, 16
Actinea chrysanthemoides, 500
Actinella, 462, biennis, 477, 479, 482, chrysanthemoides, 462, 500, 501, Cooperi, 494, 495, odorata, 499, Palmeri, 462, Richardsoni, 466, 468, Richardsoni canescens, 484, Richardsoni floribundus, 485, Rusbyi, 496, texana, 499, Vaseyi, 493, 494
Additions to the flora of the Matawan formation, 67
Adiantum Capillus-Veneris, 16, pedatum, 15, 16, 145
Adicea pumila, 146
Aecidium, 3, 8, Callirrhoes, 7, Clematidis, 7, Helianthellae, 5, **malvicola,** 6, 7, **Mertensiae,** 6, Napaeae, 7, **occidentale,** 7, **Onosmodii,** 6, pedatum, 2, **recedens,** 7, roestelioides, 7, tuberculatum, 7
Agaricus, 595, boletiformis, 603, campester rufescens, 181, **cothurnatus,** 181, hirsutus, 603, maritimus, 181, **rutilescens,** 180, saepiarius, 603, **solidipes,** 180, speciosus, 607, **sphaerosporus,** 181, striatus, 604
Agoseris agrestis, 357, glauca, 357
Agrimonia Eupatoria, 154, parviflora, 135
Agropyron, 87, repens, 154, 157
Agrostis alba, 152, 154
Ailanthus, 422
Aletes acaulis, 573, 575, **obovata,** 573
Algae, Bahaman, 93
Allium, 529–550, Geyeri, 402, **macropetalum,** 401, **Pikeanum,** 402, reticulatum, 402, tricoccum, 147, vineale, 135, 136
Allium, Periodicity in root of, 529
Alnus, 127, rugosa, 135, 141, 144, serrulata, 135
Alopecurus geniculatus, 152, 154
Alsine media, 152
Alsinopsis **macrantha,** 407
Althaea rosea, 7
Amaranthus albus, 157, graecizans, 157, 158, spinosus, 156, 157
Amarella, 632
Ambrosia artemisiaefolia, 153, 157, 158, trifida, 135, 136, 137, 155, 157
Amelanchier canadensis, 144
American Association for the Advancement of Science, Botanical Club, Nomenclature Commission, 249
American botanical literature, Index to, (1901–1903), 51, 101, 169, 449, (1904), 231, 305, 359, 411, 511, 577, 617, 659
Ampelopsis quinquefolia, 135
Anantherix connivens, 24
Anaphalis margaritacea, 154
Andromeda, 128, Parlatorii, 79
Andropogon contortus, 83, scoparius, 150, 154, virginicus, 152, 154
Anemonella thalictroides, 147
Anogra albicaulis, 242, **cinerea,** 570, **latifolia,** 570, pallida, 570, **violacea,** 242, **Vreelandii,** 570
Anomalous structure on the leaf of a bean seedling, 585
Antennaria plantaginifolia, 154
Anthemis, 466, arvensis 156, Cotula, 156
Anthoxanthum odoratum, 152, 154
Aphyllon uniflorum, 147
Aplopappus phyllocephalus, 653, rubiginosus, 653
Apocynum androsaemifolium, 154
Aquilegia canadensis, 146
Arabis brachycarpa, 557, Crandallii, 557, lignifera, 557, **oblanceolata,** 557, **rugocarpa,** 357, **Selbyi,** 557
Aralia, 80, 128, nudicaulis, 147, palmata, 79, Ravniana, 79, transversinervia, 78, trifolia, 147
Arctium Lappa, 153, 156, 157, 227

Areca oleracea, 353, 354
Arenaria **Eastwoodiae,** 406, Fendleri, 407, Fendleri **Porteri,** 407, **polycaulos,** 406, saxosa, 406, stricta, 150, **Tweedyi,** 406, uintahensis, 406, verna, 407
Arisaema Dracontium, 147, triphyllum, 147, 153
Arthur, J. C. New species of Uredineae, I. Taxonomic importance of the spermogonium, 113
Asarum canadense, 145
Asclepiadaceae, Studies in, 457
Asclepias amplexicaulis, 458–460, **Bicknellii,** 458, 459, Cornuti, 153, 154, exaltata, 458, 459, incarnata, 136, 138, **intermedia,** 459, **kansana,** 457, 458, purpurascens, 154, 459, Syriaca, 153, 157, 458–460
Asclepias, A new species of, 457
Asimina parviflora, 600
Asparagus officinalis, 156
Aspergillus, 291, 299
Aspidium acrostichoides, 145, marginale, 145, spinulosum, 145
Asplenium exiguum, 658, Filix-foemina, 147, Glenniei, 658, micropteron, 658, **modestum,** 657, 658
Asplenium from Mexico, A new, 657
Aster, 153, adscendens, 654, 655, **corymbiformis,** 655, divaricatus, 150, ericoides, 153, ericoides depauperatus, 150, **griseolus,** 653, 654, griseus, 634, laevis, 148, macrophyllus, 148, Nelsonii, 654, **Osterhoutii,** 654, 655, paniculatus, 655, puniceus, 153, salicifolius, 654, salicifolius caerulescens, 654, **Tweedyi,** 655, **Underwoodii,** 654
Astragalus canadensis, 562, elegans, 562, flexuosus, 562, Hallii, 562, Mortonii, 562, **oreophilus,** 561, 562, **Shearii,** 562, tegetarius, 563, wingatensis, 563
Atragene pseudo-alpina **diversiloba,** 409
Atriplex canescens, 404, eremicola, 403, hastata, 156, 157, Nuttallii, 403, **oblanceolata,** 403, **odontoptera,** 404
Aularthrophyton, 71
Aulospermum **angustum,** 358
Avena fatua, 154
Azalea nudiflora, 144

Bacillus ramosus, 529
Bahaman algae, Notes on, 93
Baldwinia atropurpurea, 15, 26, uniflora, 26
Bananas, Two new species of American wild, 445
Baptisia tinctoria, 621, 629
Barbarea Barbarea, 147, 152, 156, vulgaris, 147, 152
Bartonia albicaulis, 566
Bean seedling, An anomalous structure on the leaf of a, 585
Benzoin Benzoin, 141, 144, 145
Berry, E. W. Additions to the flora of the Matawan formation, 67
Bessey, C. E. Chimney-shaped stomata of Holacantha Emoryi, 523
Betula, 127, 502, **alleghaniensis,** 166, fontinalis, 165, lenta, 155, 166, lutea, 166, nigra, 166, **Piperi,** 165, **Sandbergi,** 166, **utahensis,** 165
Bicknell, E. P. Studies in Sisyrinchium, 379
Bicuculla cucullaria, 145, 153
Bidens bipinnata, 141, 153, 157, connata, 157, 158, discoides, 153, frondosa, 141, 153, laevis, 141, 153
Bihai, 445–447, **aurantiaca,** 445, **Bihai,** 445, **borinquena,** 445, **Burchellii,** 445, **Champneiana,** 445, **choconiana,** 445, **Collinsiana,** 445, 447, **crassa,** 445, **distans,** 445, **elongata,** 445, **episcopalis,** 445, **humilis,** 445, **latispatha,** 445, **librata,** 445, **lingulata,** 445, **longa,** 446, pendula, 447, **platystachys,** 445, **purpurea,** 445, **reticulata,** 446, **rostrata,** 445, **rutila,** 445, **spissa,** 445, **tortuosa,** 445
Birches, New North America, 165
Blackening of Baptisia tinctoria, 621
Boletus, 29, arcularius, 37, 327, brumalis, 33, Calceolus, 41, 42, caudicinus, 40, cinnabarinus, 420, cinnamomeus, 343, citrinus, 607, coccineus, 420, conchifer, 425, 426, confluens, 344, coriaceus, 344, crinitus, 609, distortus, 422, elegans, 41, exasperatus, 37, fasciculatus, 33, fibrosus, 609, flavus, 595, frondosus, 336, fuliginosus, 606, gilvus, 418, graveolens, 424, hirsutus, 594, hispidus, 594, 595, hydnatinus, 609, hydnoides, 609, Juglandis, 40, nummularius, 41, 42, pavonius, 423, perennis, 341, 344, Polyporus, 33, radiatus, 599, ramosissimus, 336, resinosus, 607, rubiginosus, 606, rutilans, 416, sanguineus, 421, sistotremoides, 338, 339, spongiosus, 594, squamosus, 40, striatus, 423, suberosus, 416, subtomentosus, 344, sulphureus, 607, umbellatus, 337, virgineus, 426
Botanical literature, American, 51, 101, 169, 231, 305, 359, 411, 449, 511, 577, 617, 659
Botanical nomenclature, Code of, 249
Botrychium virginianum, 147

Botryophora, 95, Conquerantii, 96, 97, occidentalis, 96
Botrytis, 291
Bouteloua breviseta, 86, 87, Havardii, 87
Brachiolejeunea, 185
Brachyelytrum erectum, 15
Brickellia californica, 646, reniformis, 646, Wrightii, 646
Britton, N. L. Four new North American birches, 105. On Pisonia obtusata and its allies, 611
Bursa Bursa-pastoris, 152
Bursera gummifera, 606

Cacalia floridana, 27, ovata, 27, sulcata, 27
Caesalpinia, 5
Calamintha Clinopodium, 136
Calandrinia nevadensis, 357
California species of Sisyrinchium, 379
Callirrhoe involucrata, 7
Callitris, 70, quadrivalvis, 71
Calonyction, 589–592, **aculeatum,** 590, 592, **album,** 591, bona-nox, 589, 590, grandiflorum, 591, speciosum, 590, speciosum pubescens, 591
Caloporus, 29, 30
Caltha palustris, 135
Calystegia Sepium, 137
Camptosorus rhizophyllus, 146, 148
Cannon, W. A. Observations on the germination of Phoradendron, 435
Cantharellus aequinoctialis, 333, alveolaris, 327, cibarius, 34
Cantua, 48, 50
Capriola Dactylon, 154
Capsella Bursa-pastoris, 152
Carbon monoxide and other gases, Influence of, 57, 167
Cardamine bulbosa, 135, 141, 153, rhomboidea, 135, rotundifolia, 135
Carduus arvensis, 156, lanceolatus, 141, **156, 157**
Carex, 140, 152, pennsylvanica, 147, squarrosa, 140
Carpinus caroliniana, 143
Carpites Myricarum, 74
Carpolithus dubius, 81, juglandiformis, 81
Carya alba, 143, microcarpa, 143, porcina, 143
Cassia emarginata, 5
Castala, 524
Castanea, 127, dentata, 143, 145, sativa Americana, 143
Castilleja brachyantha, 644, breviflora, 644, **brunnescens,** 643, coccinea, 150, confusa, 644, **obtusiloba,** 644, pallida, 644, **pilifera,** 246, pilosa, 246, **puberula,** 644, rhexifolia, 644
Catherinea angustata, 64
Catis, 353, Martiana, 353
Catoblastus, 350
Caulerpa **compressa,** 93, paspaloides, 93, 94
Caulopyllum thalictroides, 145
Cayaponia racemosa, 2
Ceanothus Fendleri, 564, ovalis pubescens, 564, **subsericeus,** 564
Celastrophyllum, 128, crenatum, 74, Newberryanum, 78
Celastrus, 128, scandens, 144
Celtis occidentalis, 143
Cephalanthus occidentalis, 135, 136, 137
Cephalophora anthemoides, 500
Cerastium behringianum, 405, Earlei, 405, oblongifolium, 150, **pulchellum,** 405, viscosum, 156, vulgatum, 156
Ceratolejeunea, 200
Cercis canadensis, 144
Cerioporus, 29, 30, 41
Chaetochloa glauca, 156, 157
Cheiranthus nivalis, 558
Chelidonium, 429, 430, 433
Chelone glabra, 148
Chemical irritation, Effect on respiration of fungi, 291
Chemical notes on "bastard" logwood, 367
Chenopodium album, 154, 156, 157, ambrosioides anthelminthicum, 156, anthelminthicum, 156, 157, **aridum,** 240, **Wolffii,** 240
Chimaphila maculata, 24, 147
Chimney-shaped stomata of Holacantha, 523
Chondrophylla, 245, **americana,** 245, **Fremontii,** 245
Chondrophyton laceratum, 77
Chrysanthemum Leucanthemum, 152, 156
Chrysobalanus oblongifolius, 23
Chrysomyxeae, 116
Chrysophyllum, 330
Chrysopogon secundus, 12
Chrysopsis **alpicola,** 649, **amplifolia,** 648, Bakeri, 649, **caudata,** 648, hispida, 649, **horrida,** 648, 649, pinifolia, 12, 26, villosa, 648
Chrysosplenium americanum, 134
Chrysothamnus graveolens, 652, Howardi, 653, **Newberryi,** 652, 653, Parryi, 633, **patens,** 652
Cichorium Intybus, 156, 157
Cicuta maculata, 136, 137, 141, 153
Cimicifuga racemosa, 147, 153
Cinna latifolia, 150
Cinnamomum, 128
Cissites, 128

Citrullus vulgaris, 158
Cladomeris, 333, 334, ramosissima, 337, Schweinitzii, 339, umbellata, 337
Cladothrix lanuginosa, 88
Clavaria **myceliosa,** 182, pusilla, 182
Claytonia caroliniana, 405, caroliniana lanceolata, 405, carolinana sessilifolia, 405, lanceolata, 405, lanceolata sessilifolia, 405, **rosea,** 404, 405, triphylla, 357, virginica, 145
Clematis Douglasii, 7, virginiana, 153
Clinopodium vulgare, 136, 154
Clitocybe albissima, 178, cerussata, 178, **piceina,** 178
Clitopilus **sphaerosporus,** 179
Closterium striolatum erectum, 161
Cnicus arvensis, 156
Coccocladus occidentalis, 95, occidentalis **Conquerantii,** 96, occidentalis **laxus,** 95, 96
Cockerell, T. D. A. North American species of Hymenoxys, 461
Cocos nucifera, 551, 554
Code de la nomenclature botanique, 263
Code of botanical nomenclature, 249
Coleosanthus **albicaulis,** 646, **reniformis,** 646, Wrightii, 646
Coleosporieae, 116
Coleosporium, 114
Collinsonia canadensis, 148
Collybia dryophila, 179, radicata, 179, **umbonata,** 178
Cololejeunea, 194, 205, 213, Goebelii, 207
Colorado, Desmids from, 161
Colorado plants, Notes on, 357
Coltricia, 325, 339, 340–348, 427, **cinnamomea,** 342–344, 347, 348, connata, 341, 344, leptocephala, 341, **Memmingeri,** 342, 347, nummularia, 341, **obesa,** 342, 346, 347, **parvula,** 342, 344, 345, 347, perennis, 342, 344–346, 348, **tomentosa,** 342, 346
Coltriciella, 325, 348, 427, **dependens,** 348, 599
Colurolejeunea, 205
Commelina nudiflora, 146, 153, virginica, 141, 146, 157
Comptonia, 74
Concerning some West American smuts, 83
Conferva, 135, umbilicalis, 95, umbilicata, 95
Coniferous stem, 81
Convolvulus, 590, aculeatus, 589, 590, arvensis, 156, grandiflorus, 589, 591, latiflorus, 590, muricatus, 590, sepium, 137, 154, 157
Cook, O. F. Nomenclature of the royal palms, 349
Corallina Flabellum, 94
Corallorhiza multiflora, 492, **ochroleuca,** 402, odontorhiza, 147
Coreopsis discoidea, 153
Coriospermum **emarginatum,** 404, marginale, 404, villosum, 404,
Cornus, 128, Amomum, 137, Baileyi, 572, florida, 144, 145, sericea, 137, stolonifera, 572
Correction: Influence of carbon monoxide and other gases upon plants, 167
Corylus americana, 144
Cosmarium, 581, balteum **coloradense,** 162, Botrytis, 162, impressulum minor, 583, laeve septentrionale, 162, margaritiferum, 162, Meneghinii, 162, pseudopyramidatum, 583
Covillea tridentata, 436
Croomia pauciflora, 21
Crucifera spinosa, 524
Cryptoporus, 427
Cubelium concolor, 23, 145
Cucurbita, 548
Culmites priscus, 71
Cunila Mariana, 154, origanoides, 154
Cunninghamites, 72, 81, 82, elegans, 69, 70, squamosus, 70, Sternbergii, 73
Cuphea viscosissima, 154
Cushman, J. A. Desmids from southwestern Colorado, 161. Notes on Micrasterias from southeastern Massachusetts, 393. Desmids from Newfoundland, 581
Cyclolejeunea, 183, 184, 185, 192–210, 211–213, **accedens,** 192, 201, 202, 204–206, 208–210, **angulistipa,** 192, 203–205, 209, 217, **Chitonia,** 192, 194, 196, 197, 200–203, 209, **convexistipa,** 192, 198, 200, 202, 204, 208–210, **peruviana,** 196, 197, 205, 209
Cyclolejeunea, Vegetative reproduction of, 205
Cyclomyces fuscus, 423, Greenei, 423, 424
Cyclomycetella, 422, 423, 427, **pavonia,** 423
Cycloporus, 423, 427, **Greenei,** 424
Cylindrocystis, 581, 582, americana, 161, 582
Cymopterus acaulis, 357, Parryi, 357
Cynodon Dactylon, 154
Cynoglossum, virginicum, 147
Cyperus, 140, inflexus, 151, strigosus, 152
Cypripedium acaule, 147, hirsutum, 147, 148, parviflorum 147, 148, pubescens, 147
Cystoseira Myrica, 99

Dactylis glomerata, 152, 154

Dactylopora Annulus, 98, digitata, 98, Eruca, 98
Daedalea Berkeleyi, 604, braziliensis, 328, Burserae, 606, epigaea, 339, jamaicensis, 606, pallidofulva, 605, rhabarbarina, 604, saepiaria, 603, striata, 604
Dahlia, 548
Daily periodicity in the root of Allium, 529
Dammara borealis, 70, cliffwoodensis, 69
Dandeno, J. B. Mechanics of seed-dispersion in Ricinus communis, 89
Dasycladus Conquerantii, 96, occidentalis, 95, vermicularis, 93
Datura Stramonium, 156, 157, Tatula, 156, 157
Daucus Carota, 152, 156, 157
Dentaria laciniata, 147
Desmidium Baileyi, 581
Desmids from Newfoundland, 581
Desmids from southwestern Colorado, 161
Desmodium, 63
Dianthus prolifera, 154
Dicentra cucullaria, 145
Dicerandra linearifolia, 12, odoratissima, 25
Dicranella heterophylla, 64
Dicranolejeunea, 183, 184
Dioscorea, 50, villosa, 144
Diospyros, 127, 128, virginiana, 143
Diplachne dubia, 4, serotina, 4
Diplasiolejeunea, 205
Diplodia, 551–554, epicocos, 554
Diplopappus hispidus, 649
Dirca palustris, 16
Distichlis spicata, 86
Dodecatheon **multiflorum,** 631, pauciflorum, 631, radicatum, 631, radicatum **sinuatum,** 631
Draba caroliniana, 555, **coloradensis,** 555, cuneifolia, 555, micrantha, 555, streptocarpa **Grayana,** 555
Drepanolejeunea, 186, 191, inchoata, 196
Drosera intermedia, 141, rotundifolia, 141
Dryopteris acrostichoides, 145, marginalis, 145, spinulosa, 145

Echinocystis lobata, 144
Echinolytrum, 19
Echinospermum virginicum, 152
Ectropothecium, 309–324, amphibolum, 310, 313–317, 319, 320, 322, conostegum, 309, 318, crassicaule, 309, 310, 323, 324, flavoviride, 309, 310, 318, 319, 322, malachiticum, 309, 311, Montagnei, 323, Poeppigianum, 309, 318, rutilans, 309, 311, 313, 314, subdenticulatum, 320, vesiculare, 309, 310, 311 313, 315–317, 323, vesiculare **Poeppigianum,** 310, 315, 317, 322, 323
Effect of chemical irritation on the respiration of fungi, 291
Effects of solutions upon cell-division in root of Allium, 538
Eleusine indica 154, 156
Elfvingia, 424, 427
Elodea canadensis, 65, 134
Elymus, 87, glaucus, 87
Emerson, J. T. Relationship of Macrophoma and Diplodia, 551. Notes on the blackening of Baptisia tinctoria, 621.
Endophyllum Sempervivi, 118
Ephedra, 70
Ephemerum tenerum, 17
Epigaea, 430, repens, 145
Epilobium adenocaulon, 568, brevistylum, 567, 569, Drummondii, 568, 569, glandulosum, 567, 568, Hornemannii, 567, **ovatifolium,** 567, 568, 569, **Palmeri,** 569, **rubescens,** 568, **stramineum,** 568, 569, tetragonum, 569
Epiphegus virginiana, 146
Equisetum arvense, 157
Eragrostis amabilis, 17, Brownei, 17, neo-mexicana, 87, simplex, 17
Erigeron annuus, 156, bellidifolium, 147, canadensis, 154, pulchellus, 147
Eriocaulon compressum, 20, decangulare, 20, septangulare, 14, texense, 20
Eriochloa punctata, 84
Eriogonum effusum, 240, flavum, 239, flavum vegetius, 239, Jamesii, 239, Jamesii flavescens, 239, Jonesii, 240, microthecum, 240, **salinum,** 240, tomentosum, 15, **vegetius,** 239
Ervum, 118
Eryngium integrifolium, 23, 24, integrifolium ludovicianum, 23, ludovicianum, 23, 24, virgatum, 23
Erysimum elatum, 558, **nivale,** 558, **oblanceolatum,** 557, **radicatum,** 558, Wheeleri, 558
Erythronium, 430, americanum, 145, 153
Eschscholtzia, 429, 430, 432, 433
Euastrum **Allenii,** 582, ampullaceum, 582, binale, 583, Didelta, 162, elegans, 583, verrucosum, 162
Eucallitris, 71
Eucalyptus, 128, Geinitzi, 78
Euglena, 135
Euonymus americanus, 144, atropurpureus, 144
Eupatorium ageratoides, 152, aromaticum, 150, incarnatum, 25, perfolia-

tum, 152, purpureum, 141, 146, 152, 155
Euphorbia corollata, 154, Cyparissias, 156
Euterpe, 350, 351, 352, caribaea, 353, 354, oleracea, 353
Evans, A. W. Hepaticae of Puerto Rico, 183
Explorations in the coastal plain of Georgia, 9

Fagopyrum Fagopyrum, 59, 61
Fagus, 127, americana, 143, 145, 149, ferruginea, 143
Favolus, 37, 325, alutaceus 327, alveolaris, 327, Boucheanus, 327, Boucheanus peponinus, 327, braziliensis, 328, 329, brunneolus, 331, canadensis, 327, caperatus, 331, cucullatus, 332, 333, curtipes, 332, 333, Curtisii, 36, europaeus, 325, 327, flaccidus, 333, Friesii, 333, guadalupensis, 333, hirtus, 325, hispidulus, 329, induratus, 332, lacerus, 333, melanopus, 44, ohiensis, 327, princeps, 329, purpurascens, 331, tessellatus, 329, velutipes, 333
Festuca ovina, 154
Ficaria Ficaria, 147
Ficus, 128, atavina, 75, Benjaminea, 75, cuspidata, 75, elastica, 75, Krausiana, 75, nitida, 75, Peruni, 75, protogaea, 75, pulchella, 75, stricta, 75
Fimbristylis autumnalis, 18, dipsacea, 19, Frankii, 18, laxa, 151, perpusilla, 17, 18, 19, spadicea, 6, Vahlii, 18
Flammula **Braendlei,** 180, **eccentrica,** 179
Flaveria, 463, australasica, 463, repanda, 463
Floerkea proserpinacoides, 146
Flora of the Matawan formation, Additions to the, 67
Flora, Rocky Mountain, 399, 555, 631
Fomes, 427, graveolens, 424, Khortalsii, 417
Fouquieria, 45–50, Macdougalii, 45–48, splendens, 45–48
Fouquieria, The spines of, 45
Four new North American birches, 165
Fragaria virginica, 154
Frasera speciosa **angustifolia,** 632, speciosa **stenosepala,** 632
Fraxinus americana, 131, 135, 143, 155
Frenela, 70, 71
Frenelites, 70
Frenelopsis, 70, Hoheneggeri, 71, 72
Frullania, 205
Funalia, 608, trichomalla, 608
Fungi, Effect of chemical irritation on the respiration of, 291
Fungi, New species of, 177
Fungi on Hymenoxys, 508

Gaillardia, 462, 463, 487
Galeorchis spectabilis 147, 148
Galinsoga parviflora, 154
Galium Aparine, 118, triflorum, 147
Ganoderma, 334, 427
Gases, influence upon plants, 57, 167
Gaultheria procumbens, 145
Gaura **coloradensis,** 572, Pitcheri, 572, sinuata, 572
Gaylussacia resinosa, 144, 145
Gayophytum diffusum, 569, **intermedium,** 569, ramosissimum, 569
Geinitzia formosa, 68
Gentiana, 245, 632, acuta, 244, Fremontii, 245, heterosepala, 244, humilis, 245, **monantha,** 244, 245, prostrata, 245, prostrata americana, 245, tenella, 244
Gentianella **Clementis,** 631, 632, plebeja, 632
Georgia, Explorations in, 9
Geranium maculatum, 147, 153
Gerardia filicaulis, 25, georgiana, 25, paupercula, 25
Germination of Phoradendron, 435
Gies, W. J. Chemical notes on "bastard" logwood, 367
Gilia aggregata, 632, congesta crebrifolia, 633, **Crandallii,** 634, crebrifolia, 633, Haydeni, 635, iberidifolia, 633, inconspicua, 634, Macombii, 634, minutiflora, 634, multiflora, 634, **polyantha,** 634, **roseata,** 633, **scariosa,** 632, **spergulifolia,** 633, subnuda, 635, **Tweedyi,** 634
Glechoma hederacea, 152
Gleditsia triacanthos, 135
Gleichenia Saundersii, 67, Zippei, 67
Globifomes, 424, 427, **graveolens,** 424
Gloeophyllum, 602
Gossypium, 63
Griffiths, D. Concerning some West American smuts, 83
Grifola, 325, 333–338, 427, 607, badia, 333, **Berkeleyi,** 334, 335, 337, 338, cristata, 333, 334, **fractipes,** 335, 338, frondosa, 333–338, lucida, 333, platypora, 333, **poripes,** 334, 335, **ramosissima,** 334–336, **Sumstinei,** 334, 335, varia, 333
Griggs, R. F. Two new species of American wild bananas with a revision of the generic name, 445
Grindelia **aphanactis,** 647, nuda, 647, perennis, 646, **serrulata,** 646, squarrosa, 646, 647
Gruenberg, B. C. Chemical notes on "bastard" logwood, 367
Gutierrezia diversifolia, 647, **linearis,**

647, longifolia, 647, **scoparia,** 647
Gymnospermous cone, 72

Haematoxylon, 63, 64, campechianum, 368, 376
Hamamelis virginiana, 144
Hapalopilus, 415–419, 427, **fulvitinctus,** 416, 419, **gilvus,** 415, 419, 597, **hispidulus,** 416, 419, **licnoides,** 415–418, nidulans, 415, 416, **rutilans,** 415, 416, **sublilacinus,** 415–417
Harpalejeunea, 211, 212
HARPER, R. M. Explorations in the coastal plain of Georgia during the season of 1902, 9
HARSHBERGER, J. W. Phyto-geographic sketch of extreme southeastern Pennsylvania, 125
Hedeoma **ovata,** 245, pulegioides, 152, Reverchoni, 246
Hedera, 128
Helenium, 463
Helianthella nevadensis, 5
Helianthus annuus, 59, 61, 157, 158, giganteus, 153
Heliconia, 445
Heliopsis helianthoides, 141, 153, laevis, 153
Helvella gracilis, 182, panormitana, 182, **Stevensii,** 182
Hepatica Hepatica 147, triloba, 147
Hepaticae of Puerto Rico, 183
Heracleum lanatum, 4, 135, 136, 141, 146, 153
Heuchera americana, 146
Hexaclinis, 71
Hexagona, 40, 325–333, 427, **alveolaris,** 326, 327, **brunneola,** 326, 331, **caperata,** 326, 331, **cucullata,** 327, 332, **daedalea,** 326, 328, **floridana,** 326, 330, **fragilis,** 326, 329, **hispidula,** 326, 329, **hondurensis,** 326, 331, **indurata,** 327, 332, **micropora,** 326, 328, Mori, 325, 327, **portoricensis,** 326, 331, **princeps,** 326, 329, **purpurascens,** 326, 331, **Taxodii,** 327, 332, **tessellatula,** 326, 330, **Wilsonii,** 326, 329
Hibiscus Moscheutos, 136, 139
Hicoria, 127, glabra, 143, microcarpa, 143, ovata, 143
Hieracium Gronovii, 147, paniculatum, 150, scabrum, 147, venosum, 147
Hilaria, 86
Holacantha Emoryi, 523
Holcus lanatus, 154
Holodiscus dumosus, 559, **microphyllus,** 559
Homalobus campestris, 564, **Clementis,** 563, **decurrens,** 563, hylophilus, 564, tegetarius, 563, **wingatensis,** 563, **Wolfii,** 562
Hookeria, 313, Poeppigiana, 309, 317, 319–322, praelonga, 309–311, 314, 315
HORNE, W. T. Anomalous structure on the leaf of a bean seedling, 585
HOUSE, H. D. Nomenclature of Calonyction bona-nox, 589
Houstonia caerulea, 154
HOWE, M. A. Notes on Bahaman algae, 93
Hyacinthus, 548
Hybrids, Two possible Asclepias, 457
Hydastylus, 379
Hydrangea arborescens, 16, quercifolia, 13
Hydrastis canadensis, 147, 148
Hydrochloa fluitans, 14
Hydrocotyle umbellata, 141
Hydrodictyon, 135
Hydrophyllum virginicum, 145, 153
Hygrolejeunea, 212
Hymenochaete, 342
Hymenopappus ligulaeflorus 474, radiatus, 463
Hymenoxys, 461–509, anthemoides, 462, **canescens,** 465, 484, 485, canescens **biennis,** 465, 478, 481, 482, 485, 496, canescens **nevadensis,** 465, 484, chrysanthemoides, 462, 466, 467, 500–503, chrysanthemoides **excurrens,** 466, 501, chrysanthemoides **juxta,** 466, 503, 508, chrysanthemoides **Mearnsi,** 466, 506, chrysanthemoides **multiflora,** 466, 502, 503, 504, 506, 507, chrysanthemoides **Osterhouti,** 466, 501, 503, 505, **Cooperi,** 465, 481, 494, 496, Cooperi **argyrea,** 465, 496, Cooperi **Grayi,** 465, 495, 496, **Davidsonii,** 466, 503, 505, 508, **Earlei,** 464, 486, 487, 492, 493, **floribunda,** 464, 476, 477, 485–490, 492, 493, 506, 508, 509, floribunda **arizonica,** 464, 487, 488, 491, floribunda **intermedia,** 464, 491, 492, floribunda **utilis,** 464, 468, 486, 487–491, Haenkeana, 462, **helenioides,** 465, 479, 480, 481, 493, **latissima,** 466, 498, **Lemmoni,** 462, 466, 477–482, Lemmoni **Greenei,** 466, 479–481, **Metcalfei,** 465, 492, 493, odorata, 499, 500, **olivacea,** 465, 497, 498, **Richardsoni,** 463, 464, 467, 468, 471–473, 479, 486, 488, Richardsoni **ligulaeflora,** 464, 473, 474–476, Richardsoni **macrantha,** 464, 468, 475–477, 488, 489, Richardsoni macrantha **Nelsoni,** 464, 475, Richardsoni macrantha **utahensis,** 464, 477, Richardsoni **pumila,** 464, 472, 473–475, Richardsoni pumila **Macouni,** 464, 474, **Rusbyi,** 465, 493, 494, 496, 497, **subintegra,** 465, 480,

498, **texana,** 466, 499, Tweediei, 462, **Vaseyi,** 465, 468, 493, 494
Hymenoxys, North America species of, 461
Hyospathe, 352, elegans, 352
Hypericum aureum, 13
Hypnum callidum, 319, conostegum, 309, 312, 313, 315, 318–322, cupressiforme, 324, glaucosum, 320, Montagnei, 309, 310, 312, 315–317, 319, 321, 323, 324, Poeppigianum, 313, 317, 319, 320, rutilans, 311, 313, 319, scaturigenum, 314, subdenticulatum, 313, 320, vesiculare, 309, 311–316, 319
Hypoxis erecta, 147, hirsuta, 147

Idria, 48
Ilex, 33, 128, verticillata, 141
Impatiens aurea, 140, 146, 153, biflora, 135, 136, 140, 146, 153, fulva, 135
Importance of the spermogonium, 113
Index to American botanical literature (1901–1903), 51, 101, 169, 449, (1904), 231, 305, 359, 411, 511, 577, 617, 659
Influence of carbon monoxide and other gases upon plants, 57, 167
Inoderma, 593
Inodermus, 593, hispidus, 595, radiatum, 599
Inonotus, 341, 415, 593–602, **amplectens,** 594, 600, **corrosus,** 594, 598, cuticularis, 593, 596, **dryophilus,** 594, 597, fibrillosus, 593, **fruticum,** 594, 600, 601, **hirsutus,** 594, hispidus, 593, 595, 596, hypococcinus, 593, **jamaicensis,** 594, 597, nidulans, 593, 416, **perplexus,** 594, 596, **pusillus,** 594, 599, radiatus, 593, 594, 599, 600, **texanus,** 594, 597, triqueter, 593, unicolor, 593, vulpinus, 593, **Wilsonii,** 594, 598
Ipomoea aculeata, 590, alba, 589, 591, bona-nox, 589, 590, 591, longiflora, 591
Iriartea, 350
Iris versicolor, 135, 140, 153
Ischnoderma, 606, **fuliginosum,** 606, resinosum, 606
Isnardia palustris, 135
Isoetes melanospora, 18, Orcuttii, 18, riparia, 131, saccharata, 130, 131
Ixophorus glaucus 150, 154, viridis, 154

Jacquinia, 599
Jasminum sempervivum, 118
Jessenia, 352, polycarpa, 352
Juglans, 127, 128, cinerea, 143, nigra, 143
Juncoides campestre, 147, parviflorum, 401, **subcapitatum,** 401
Juncus alpinus insignis, 152, 399, balticus **vallicola,** 399, brachycarpus, 20, **brunnescens,** 400, canadensis, 22, Mertensianus, 400, nevadensis, 400, **parous,** 401, Richardsonianus, 400, saximontanus, 400, 401, **truncatus,** 399, xiphioides montanus, 400
Jungermannia convexistipa, 198, denticulata, 213, 214, lunulata, 186, patinfera, 198, peruviana, 196, phyllogenides 186, tortuosa, 186, 188
Juniperus virginiana, 143, 145
Jussiaea diffusa, 136, repens, 136

Kalmia latifolia, 16, 144, 145, 150
Kansas, A new species of Asclepias from, 457
KELLICOTT, W. E. Daily periodicity of cell-division and of elongation in the root of Allium, 529
Kodex der botanischen Nomenklatur, 277
Koeberlinia, 523
Koellia flexuosa, 150

Lachenalia luteola, 229
Lachnocaulon Beyrichianum, 14, 20
Lactuca scariola, 156, 157
Laetiporus, 607, **speciosus,** 607
Laportea canadensis, 148
Lappa officinalis, 227
Lappula **angustata,** 636, **Besseyi,** 636, floribunda, 636, 637, scaberrima, 637, virginiana, 152
Laricopsis, 68
Laurus, 128, Hollickii, 77, plutonia, 77, proteaefolia, 78
Lavauxia **flava,** 243, 244, triloba, 243, 244
Lejeunea, 193, 205, accedens, 183, 184, 201, adglutinata, 196, aemula, 219, angulistipa, 203, 214, calcarata, 190, chaerophylla, 188, 189, 190, Chitonia, 194, 196, convexistipa, 183, 184, 198, decora, 218, 219, 224, denticulata, 214, 218, 219, epitheta, 196, foliorum, 196, leptocardia, 183, 201, 202, lunulata, 186, macrocardia, 216, 224, martinicensis 186, Mougeotii, 198, peruviana, 183, 196, serrulata, 221, Sieberiana, 188, stachyclada, 198, surinamensis, 198, tortuosa, 186, vagans, 217, vulcanica, 219, 220, 221
Lemna minor, 134, 138
Lenzites mexicana, 605, protracta, 604, rhabarbarina, 603, saepiaria, 603, striata, 604, 606, trabea, 605, umbrina, 604, vialis, 605
Lenzitina, 602, abietina, 602, cinnamomea, 602, septentrionalis, 602
Leonurus Cardiaca, 154
Lepidium virginicum, 154, 157, 158

Lepidodendron, 81
Lepiota **brunnescens,** 177, cristata, 177, **Glatfelteri,** 177
Leptamnium virginianum, 146
Leptilon canadense, 154
Leptolejeunea, 186, 191, exocellata, 191
Leptorchis liliifolia, 147, 148
Lepto-Uredineae, 120
Lepto-Uromyces, 1
Leskia capillaris, 314, rutilans, 309, 313, 314, 320, rutilans portoricensis, 311, 314, 321
Lespedeza virginica, 150
Leucampyx Newberryi, 463
Leucoporus, 29, 30
Liagora annulata, 99, valida, 99
Lilium canadense, 148, candidum, 229, superbum, 153
Linaria Linaria, 154, 156, 157, vulgaris, 154
Linum arkansanum, 241, **compactum,** 241, puberulum, 241
Liparis liliifolia, 147
Liquidambar, 127, Styraciflua, 135, 143
Liriodendron, 77, 127, 128, Tulipifera, 143, 145, 155
Liriodendropsis, 77, angustifolia, 77, lacerata, 77
Literature, American botanical, 51, 101, 169, 231, 305, 359, 411, 449, 511, 577, 617, 659
Lobelia cardinalis, 141, 146, 153, flaccidifolia, 25, inflata, 154, Nuttallii, 153, syphilitica, 141, 148, 153
Logwood, Chemical notes on "bastard," 367
Lolium perenne, 152
Loranthus, 439
Ludwigia alternifolia, 136, palustris, 135
Lupinus, 530, 547
Luzula campestris, 147
Lychnis Drummondii, 408, **striata,** 408
Lycopodium annotinum, 150, clavatum, 150, dendroideum, 150, lucidulum, 150, obscurum, 150
Lycopus sessilifolius, 154, virginicus, 154
Lycurus phleoides, 84
Lysimachia nummularia, 146, 154, quadrifolia, 153

MacDougal, D. T. Influence of carbon monoxide and other gases upon plants, 57, 167
Macdougalia, 462, 499, Bigelovii, 462
Macrophoma, 551–554
Magnolia, 128, amplifolia, 76, californica, 76, Capellinii, 76, grandiflora, 16, macrophylla, 22, pseudoacuminata, 76, speciosa, 76, tenuifolia, 76, tenuinervis, 76
Malva rotundifolia, 154
Malvastrum coccineum, 7
Marasmius **Copelandi,** 182, perforans, 182
Marchesinia, 185, Mackaii, 185
Marshallia graminifolia 27, ramosa, 27
Massachusetts, Notes on Micrasterias from southeastern, 393
Matawan formation, Flora of the, 67
Matricaria, 466, 502, 505, grandiflora, 501, inodora, 154
Maxon, W. R. A new Asplenium from Mexico, 657
Mechanics of seed-dispersion in Ricinus communis, 89
Medeola virginica, 147
Meibomia, 63, 64
Melanopus, 30, 41, marasmioides, 44
Melanthium dispersum, 21, virginicum, 21
Melilotus alba, 152, 156, 157, officinalis, 157
Menispermites, 128
Menispermum canadense, 144
Mentha, 153, spicata, 141, 153
Mentzelia albicaulis, 566, dispersa, 566
Meripilus, 333
Mertensia **alba,** 638, alpina, 640, **canescens,** 640, ciliata, 638, linearifolia, 639, ovata, 639, paniculata, 6, 638, **Parryi,** 639, **perplexa,** 639, **picta,** 638, polyphylla **platensis,** 638, pratensis, 638, sibirica, 6, virginica, 145, viridis, 639, **viridula,** 639
Merulius alveolaris, 327, daedaleus, 328
Mesadenia floridana, 27, sulcata, 27, tuberosa, 27
Mesembryanthemum, 63, 64
Mesocarpus, 135
Mesotaenium, 581, Endlicherianum, 582
Metzgeriopsis, 205, 210
Mexico, A new Asplenium from, 657
Micrampelis lobata, 144
Micrasterias americana, 395, americana recta, 395, americana **spinulifera,** 395, apiculata, 394, apiculata fimbriata, 394, conferta **Novae-terrae,** 583, denticulata, 394, depauperata, 395, 396, depauperata Kitchelii, 396, depauperata **Wollei,** 396, fimbriata, 394, fimbriata simplex, 394, furcata, 394, Kitchellii, 396, laticeps, 395, mahabuleshwarensis compacta, 395, muricata, 396, papillifera, 394, radiosa, 394, radiosa **Wollei,** 394, rotata, 163, simplex, 394, truncata, 395
Micrasterias from southeastern Massachusetts, Notes on, 393
Microdictyon crassum, 94, umbilicatum, 94, 95

Micropuccinia, 2, 3
Mimosa, 63, 64
Mimulus ringens, 141, 153
Mitchella repens, 150
Mitella diphylla, 147
Mnium undulatum, 64
Molinia, 4
Mollugo verticillata, 156
Monarda fistulosa, 153
Monardella **dentata,** 641, odoratissima, 641
Monotropa uniflora, 148
Morgan, T. H. Polarity and regeneration in plants, 227
Moriconia cyclotoxon, 70
Morus rubra, 144
Mucronoporus, 341, 342, circinatus, 341, dualis, 341, sublilacinus, 417, tomentosus 341, 346
Munda Valli, 592
Murrill, W. A. Polyporaceae of North America, 29, 325, 415, 593
Musa, 188
Muscari botryoides, 152
Myosotis palustris, 135, 141, 153
Myrica, 73, 128, acuminata, 74, **cliffwoodensis,** 73, granulosa, 74, hakeaefolia, 74, Heerii, 73, parvula, 74, Schenkiana, 74, Studeri, 74, thulensis, 74, Torreyi, 74, Ungeri, 74, vindobonensis, 74
Myriophyllum verticillatum, 135
Myrsine, 128

Nabalus albus, 154, altissimus, 154, 157
Nasturtium officinale, 135, palustre, 135
Neea, 612
Negundo aceroides, 143
Nelson, A. New plants from Wyoming, 239
Nelumbo lutea, 134
Neomeris annulata, 98, 99, **Cokeri,** 97, 98, dumetosa, 98, 99, Eruca, 98, Kelleri, 98, 99
Nepeta Cataria, 152, Glechoma, 152
New Asplenium from Mexico, 657
New North American Birches, 165
New plants from Wyoming, 239
New species of fungi, 177
New species of Uredineae, 1
New York, Two possible Asclepias hybrids from, 457
Newfoundland, Desmids from, 581
Nidularia, 426
Nigrofomes, 425, 427, **melanoporus,** 425
Nitella, 65, 135
Nomenclature, Botanical, 249, 263, 277
Nomenclature of Calonyction bona-nox, 589
Nomenclature of the royal palms, 349
North American birches, Four new, 165
North American Polyporaceae, 29, 325, 415, 593
North American species of Hymenoxys, 461
Note on the sexual generation and the development of the seed-coats in certain of the Papaveraceae, 429
Notes on Bahaman algae, 93
Notes on the blackening of Baptisia tinctoria, 621.
Notes on Colorado plants, 357
Notes on Micrasterias from southeastern Massachusetts, 393
Nuphar advena, 134
Nymphaea, 15, advena, 134, 136, orbiculata, 14
Nyssa sylvatica, 145

Oakesia sessilifolia, 147
Oakesiella floridana, 21
Observations on the germination of Phoradendron, 435
Octoclinis, 71
Odontolejeunea, 183–192, 193, 202, 205, 211, 213, convexistipa, 198, lunulata, 184, 186, 188–191, mirabilis, 205, peruviana, 196, Sieberiana, 186, 188–191, subbifida, 194, 196, 197
Odontolejeunea, Vegetative reproduction in, 191
Oedogonium, 135
Oenocarpus, 351, 352, distichus, 352
Oenothera biennis, 8, 154, casepitosa, 243, pallida latifolia, 570, triloba, 244
Oligoneuron **canescens,** 652, rigidum, 652
Olsynium, 379
Omalia, 311, 317–320, rutilans, 313, 314
Omphalia, 35
On Pisonia obtusata and its allies, 611
Onagra biennis, 154, 157, 158
Onnia, 341, circinata, 341, tomentosa, 341, 346
Onoclea sensibilis, 136, 140, 141
Ononis spinosa, 50
Onosmodium carolinianum, 6, molle, 6
Opulaster **bracteatus,** 558, **glabratus,** 559, intermedius, 558, 559, monogynus, 558, 559
Opuntia, 63, tuna, 64
Orchis spectabilis, 147
Oreinotinus, 80
Oreobroma nevadensis, 357, triphylla, 357
Oreocarya **argentea,** 637, cristata, 637, **eulophus,** 637, fulvocanescens, 637, sericea, 637
Oreodoxa, 349–354, acuminata, 350–352, caribaea, 349, frigida, 351, ole-

racea, 353, 354, praemorsa, 350, Sancona, 351
Origanum vulgare, 153
Ornithogalum umbellatum, 146, 153
Orontium aquaticum, 134
Orthocarpus pilosus, 246
Oryza sativa, 59
Osmorrhiza longistylis, 147
Osmunda cinnamomea, 140, 141, Claytoniana, 140, 141, regalis, 140, 141
Osterhout, G. E. Notes on Colorado plants, 357
Ostrya virginiana, 143
Oxalis corniculata stricta, 147, 154, stricta, 147, 154, 157, violacea, 147

Pachylepis, 71
Pachylophus caespitosa, 243, **caulescens,** 571, eximius, 571, **glabra,** 242, 243, **hirsutus,** 571, macroglottis, 571, marginatus, 571
Palms, Nomenclature of the royal, 349
Panax quinquefolium, 16, 24, trifolia, 147
Panicum anceps, 154, capillare, 154, 157, 158, dichotomum, 148, 150, latifolium, 150, microcarpon, 148, nitidum, 154, obtusum, 88, rostratum, 154, sanguinale, 154, 156
Papaveraceae, Seed-coats in, 429
Parkinsonia microphylla, 436
Parnassia fimbriata, 3, palustris, 3
Parsonsia petiolata, 154
Parthenocissus quinquefolia, 135, 136, 144, 145
Paspalum setaceum, 154
Pavonia racemosa, 1
Peck, C. H. New species of fungi, 177
Pecopteris Zippei, 67
Pedicularis canadensis, 145
Pelloporus, 341, perennis, 341, 344, tomentosus, 341, 346, triqueter, 341
Pengué, 461
Penicillium, 375, glaucum, 63, 291, 294, 300, 303
Penium closterioides, 582, closterioides **spirogranatum,** 161, Digitus, 161, 582
Pennsylvania, Phyto-geographic sketch of southeastern, 125
Pentstemon acuminatus, 643, alpinus, 643, **cyathophorus,** 643, glaber, 643, **oreophilus,** 642, 643, pubescens, 154, riparius, 643, strictus, 642, **strictiformis,** 642
Peramium pubescens, 150
Periodicity of cell-division in root of Allium, 533
Periodicity of elongation in root of Allium, 543
Peziza, 34
Phacelia idahoensis, 636, Lyallii, 636, sericea, 636, sericea **ciliosa,** 636
Phaseolus, 548
Phegopteris hexagonoptera, 15, Phegopteris, 145, polypodioides, 145
Phellopterus **camporum,** 574, purpurascens Eastwoodiae, 574
Philadelphus, 48
Phileozera, 463, 466, 467, multiflora, 500, 507
Philotria canadensis, 65, 134, 135
Phleum pratense, 152, 154, 156
Phlox subulata, 150
Phoradendron californicum, 436–443, villosum, 435–441
Phragmicoma, 185, calcarata, 190, Mackaii, 185, surinamensis, 198
Phragmidium Potentillae, 119
Phryma leptostachya, 16, 148
Phyllites, 75
Phyllocladus, 72
Physaria didymocarpa **lanata,** 241
Physcomitrium turbinatum, 64
Phyto-geographic sketch of southeastern Pennsylvania, 125
Phytolacca decandra, 153, 157
Picradenia, 461–508, biennis, 479, 482, 485, canescens, 485, Cooperi, 494, Davidsoni, 486, 505, 508, Earlei, 492, floribunda, 471, 485, 486, floribunda utilis, 461, 486, helenioides, 481, intermedia, 491, Lemmoni, 462, 477, 478, ligulaeflora, 469–476, 486, macrantha, 469–471, 475, 478, 486, multiflora, 507, odorata, 501, 505, odorata Osterhoui, 505, pumila, 469, 470, 472, Richardsoni, 466, 468–470, 473, 486, Rusbyi, 496, texana, 499, Vaseyi, 493
Picradenidia, 466
Picradeniella, 466
Pilea pumila, 146
Pinus **delicatulus,** 68, echinata, 15, glabra, 16, palustris, 15
Piptoporus, 427
Pisonia, 611–615, aculeata, 612, calophylla, 611–613, calophylla rufescens, 613, coccinea, 612, discolor, 611, 613, discolor longifolia, 611, 614, floridana, 615, inermis, 612, 614, obtusata, 611, 612, 614, Pacurero, 612, rufescens, 613, suborbiculata, 613
Pisonia obtusata and its allies, 611
Plant formations and associations of southeastern Pennsylvania, 133
Plantago lanceolata, 154, 156, major, 154, Rugelii, 156, 157, virginica, 154
Plants, Notes on Colorado, 357
Plants, Polarity and regeneration in, 227
Plants from Wyoming, New, 239
Platanus, 127, occidentalis, 135, 143
Plateilema, 462, **Palmeri,** 462

Platylejeunea, 198

Plectis, 352, **Oweniana,** 352, 353

Pleurotaenium Trabecula, 162

Poa, 87, annua, 152, 154, compressa, 152, 154, trivialis, 152, 154

Podocarpus, 72

Podophyllum, 531, 533, 537, 538, peltatum, 145, 152, 154

Pogonia verticillata, 15

Pogonomyces, 609, **hydnoides,** 609, 610

Polarity and regeneration in plants, 227

Polemonium foliosissimum, 635, **Grayanum,** 635, reptans, 146, 153, **robustum,** 635, viscosum, 635

Polycodium stamineum, 144, 145

Polygonatum biflorum, 15, giganteum, 147

Polygonum arifolum, 22, aviculare, 157, dumetorum scandens, 152, hirsutum, 14, pennsylvanicum, 152, 157, Persicaria, 156, sagittatum, 141, scandens, 152, tenue, 150

Polypilus, 333, frondosus, 336, speciosus, 608, sulphureus, 608

Polypodium vulgare, 146

Polyporaceae of North America, 29, 325, 415, 593

Polyporellus, 29, 30, brumalis, 33, Polyporus, 33

Polyporus, 29, 325, 427, abortivus, 422, Acicula, 30, 31, 34, aemulans, 31, 36, amygdalinus, 43, anax, 336, 338, **arculariellus,** 31, 36, arcularius, 31, 36, 37, aureonitens, 601, Beatiei, 337, Berkeleyi, 337, brumalis, 33, **Calceolus,** 41, 42, calvescens, 418, carbonarius, 29, carneofulvus, 418, caudicinus, 29, 30, 31, 40, 43, chrysites, 598, 599, cinnabarinus, 420, circinatus, 346, columbiensis, 31, 35, confluens, 334, conglobatus, 424, connatus, 345, **Cowellii,** 31, 39, craterellus, 31, 34, 43, crocatus, 417, 419, Curtisii, 37, cuticularis, 596, cyathiformis, 43, delicatus, 30, 33, dependens, 348, dibaphus, 31, 33, discoideus, 31, 32, 35, dryadeus, 597, dryophilus, 597, dualis, 346, elegans, 32, 37, 41, 42, endocrocinus, 595, endozonus, 419, fasciatus, 29, Feathermanni, 609, fissus, 32, 41, 42, flavovirens, 335, flexipes, 39, 44, focicola, 345, fractipes, 33, 338, frondosus, 29, 334, 336, 339, fruticum, 601, fulvitinctus, 419, funalis, 608, giganteus, 336, gilvus, 418, 419, glomeratus, 599, 600, 601, gracilis, 43, hapalus, 44, Hasskarlii, 423, heteromallus, 609, hispidioides, 339, 340, hispidulus, 419, hispidus, 339, 340, 595, holosclerus, 418, Humphreyi, 44, hydniceps, 30, 32, imberbis, 339, intybaceus, 336, iodinus, 423, isioides, 418, lactifluus, 338, lentus, 37, leoninus, 608, leptocephalus, 29, licnoides, 417, luridus, 33, 34, **maculosus,** 31, 41, melanoporus, 425, mons-veneris, 608, nidulans, 416, oblectans, 343, 344, obolus, 31, 35, omalopilus, 418, pachypus, 38, 43, parvulus, 345, pavonius, 423, pellitus, 609, perennis, 344, perplexus, 596, phaeoxanthus, 31, 35, picipes, 42, **Polyporus,** 31, 33, 36, 37, poripes, 335, pruinatus, 418, pulvillus, 422, radiatus, 341, 596, 599, 601, rufescens, 422, rutilans, 416, sanguineus, 420, 421, scabriceps, 30, 32, Schweinitzii, 338, 339, 347, 596, scrobiculatus, 600, scruposus, 418, 419, similis, 39, simillimus, 347, sordidulus, 419, sordidus, 419, spectabilis, 339, splendens, 343, 344, squamosus, 29, 40, stipitarius, 39, 43, striatus, 423, subgiganteus, 337, subsericeus, 343, 344, sulphureus, 334, 607, 608, tabacinus, 423, tabulaeformis, 339, tomentosus, 346, trachypus, 42, Tricholoma, 31, 35, 36, 37, 38, 39, 43, 44, trichomallus, 608, Tuba, 31, 34, Tuberaster, 29, Ulmi, 29, 40, umbellatus, 334, 337, umbilicatus, 29, **variiporus,** 31, 37, varius, 42, vespilloneus, 423, virgatus, 30, 32, xerophyllaceus, 417

Polystictus, 340, 341, cinnamomeus, 343, crocatus, 419, dependens, 348, licnoides, 417, obesus, 346, parvulus, 341, 345, perennis, 339, 341, 344, purpureofuscus, 418, sanguineus, 421, Schweinitzii, 339, subglaber, 417

Pontederia cordata, 134, 138

Populites tenuifolius, 74

Populus, 430, alba, 158

Porella, 205

Porodiscus, 348, 427, pendulus, 599

Poronidulus, 425, 427, **conchifer,** 426

Porto Rico, see Puerto Rico

Portulacca oleracea, 150

Potentilla **Bakeri,** 560, Blachkeana, 560, canadensis, 119, 150, 152, 154, candida, 560, flabelliformis, 560, norvegica, 154, viridescens, 560

Prenanthes alba, 154, altissima, 154

Prestoea, 352, pubigera, 352

Prionolejeunea, 183, 184, 185, 193, 202, 204, 205, 211–224, **aemula,** 215, 219, 220, 221, 223, **aequitexta,** 217, 218, 219, 221, angulistipa, 203, bicristata, 219, denticulata, 213, **exauriculata,** 223, 224, **Helleri,** 221, 222, 224, **innovata,** 215–217, 223, microdonta,

184, 205, 216, subobscura, 216, vagans, 217, validiuscula, 216, vulcanica, 219
Prosopis juliflora, 436
Protophyllocladus subintegrifolius, 69
Prunella vulgaris, 148, 152
Prunus, 128, pennsylvanica, 143, serotina, 145
Pseudocymopterus **aletifolius,** 574, anisatus, 575, montanus **multifidus,** 574
Pteridium aquilinum, 150
Pterigophyllum pendulum, 321, rutilans, 313
Pteris aquilina, 150
Pterygophyllum Montagnei, 315, pendulum, 321, rutilans, 313
Puccinellia airoides, 87
Puccinia, 6, 118, Actinellae, 508, alpina, 2, australis, 4, **Bakeriana,** 3, **canadensis,** 2, columbiensis, 8, cornigera, 508, **Diplachnis,** 4, effusa, 2, Fergussoni, 2, **Helianthellae,** 4, Malvacearum, 120, **Parnassiae,** 3, **Sieversiae,** 3, suaveolens, 119, Violae, 2
Puerto Rico, Hepaticae of, 183
Pycnanthemum linifolium, 151
Pycnoporus, 415, 420, 427, cinnabarinus, 420, **sanguineus,** 420, 421
Pyrola rotundifolia, 147
Pyropolyporus, 427

Quercus, 127, alba, 143, 145, aquatica, 22, coccinea, 143, densiflora, 182, digitata, 143, Emoryi, 498, **eoprinoides,** 74, falcata, 143, flexuosa, 74, Hollickii, 74, Lyellii, 75, marylandica, 145, myrtifolia, 22, nigra, 22, 425, palustris, 143, prinoides, 75, Prinos, 143, rubra, 143, 145, Rudkinii, 75, stellata, 145, virginiana, 22, westfalica, 74

Radula, 205, complanata, 209, Hedingeri, 208, tjibodensis, 208
Ranunculus abortivus, 147, 152, bulbosus, 152, fascicularis, 147, Ficaria, 147, septentrionalis, 152
Ravenelia **Caesalpiniae,** 5, **portoricensis,** 5
Regeneration in plants, 227
Relation between cell-division and elongation, 549
Relationship of Macrophoma and Diplodia, 551
Respiration of fungi, Effect of chemical irritation on, 291
Revision of some species of Ectropothecium, 309
Rhamnus, 128
Rhapidophyllum Hystrix, 16, 19
Rhipocephalus Phoenix, 94
Rhizopus, 375, nigricans, 63
Rhododendron nudiflorum, 144
Rhus glabra, 145, 157, radicans, 144, 145, 154, 157
Rhynchospora Baldwinii, 19, ciliaris, 19, ciliata, 19, solitaria, 15, 19, Tracyi, 19
Riccia, 18, Sullivantii, 17
Richards, H. M. Influence of carbon monoxide and other gases upon plants, 57, 167
Ricinus communis, 89
Riddellia, 507
Robinia pseudacacia, 377
Robinson, W. J. Spines of Fouquieria, 45
Rocky Mountain flora, 399, 555, 631
Romellia, 325, 338, 427, **sistotremoides,** 339
Root of Allium, Daily periodicity in, 529
Roripa Nasturtium, 135, palustris, 135
Rosa lucida, 135, MacDougalii, 561, nutkana, 561, **oreophila,** 561, **Underwoodii,** 560
Royal palms, Nomenclature of the, 349
Roystonea, 351, 352, borinquena, 349, oleracea, 354, regia, 352
Rubus, 155, canadensis, 154, nigrobaccus, 135, 136
Rudbeckia hirta, 153, 157, laciniata, 136, 141, 153, 155
Rumex acetosella, 154, 156, crispus, 156, 157, obtusifolius, 156, 157
Russula, 148, **luteobasis,** 179
Rydberg, P. A. Studies on the Rocky Mountain flora, 399, 555, 631
Rydbergia, 462

Sagittaria heterophylla, 138, isoetiformis, 14, latifolia, 136, 137, 138, pusilla, 138, rigida, 138, subulata, 138, variabilis, 136
Salix 127, 128, 430, alba, 135, 136, bella, 403, floridana, 21, **pachnophora,** 403, subcoerulea, 403, tristis, 145
Salmon, E. S. Revision of some species of Ectropothecium, 309
Salomonia commutata, 147, 153
Salvia lyrata, 152, 153
Sambucus canadensis, 135, 136, 137, 141, 144
Sanguinaria, 429–433, canadensis, 16, 147
Sapindus Morrisoni, 78
Saponaria officinalis, 154, 156
Sarracenia flava × minor, 22, purpurea, 23, 141
Sassafras, 127, 128, officinale, 143, progenitor, 78, Sassafras, 143, 145
Saxifraga virginiensis, 146
Schizophyllum alneum, 604

Schoenocrambe **decumbens,** 409, linifolium, 410
Scirpus, 140, 152, lacustris, 139
Scolochloa festucacea, 86
Scutellaria integrifolia, 153, serrata, 147
Scutiger, 335, 427, griseus, 32
Sedum, 4
Seed-coats in Sanguinaria, 431
Seed-dispersion in Ricinus communis, Mechanics of, 89
Senecio aureus, 153, aureus Balsamitae, 150, Balsamitae, 150, eremophilus, 496, Fendleri **lanatus,** 358
Sequoia, 72, gracillima, 69, heterophylla, 69, Langsdorfii, 69, Reichenbachi, 68, 69
Serda, 602
Sericellae, 180
Sesia, 593, 602–606, **Berkeleyi,** 602, 604, 606, hirsuta, 602, 603, 605, **pallidofulva,** 602, 605, **striata,** 602, 604, 606
Setaria glauca, 150, 154, 156, viridis, 154
Shaw, C. H. Note on the sexual generation and the development of the seed-coats in certain of the Papaveraceae, 429
Sicyos angulatus, 144
Sideranthus **annuus,** 653
Sieglingia seslerioides, 154
Sieversia turbinata, 3
Silene Antirrhina, 407, Antirrhina **depauperata,** 408, Antirrhina **vaccarifolia,** 407, stellata, 148
Sinapis alba, 59, 61
Sisyrinchium anceps, 154, angustifolium, 382, bellum, 379, 380, 384, 388, 389, 391, **Eastwoodiae,** 380, 385, **funereum,** 380, 387, grandiflorum, 379, **Greenei,** 380, 383, 384, halophilum, 380, 381, 383, **hesperium,** 380, 390, idahoense, 383, leptocaulon, 380, 381, 383, Macounii, 380, occidentale, 382, **oreophilum,** 380, 381, 383, sarmentosum, 383, segetum, 382
Sisyrinchium, Studies in, 379
Sitanion longifolium, 87
Sium cicutaefolium, 153
Smelowskia americana, 556, **lineariloba,** 555
Smilacina racemosa, 147
Smilax, 144, 590, ecirrhata, 21, glauca, 145, herbacea, 147, rotundifolia, 145
Smuts, West American, 83
Solanum carolinense, 157, Douglassii, 641, **interius,** 641, 642, nigrum, 641, nodiflorum, 642, pterocaulon, 642
Solea concolor, 145
Solidago, 155, 158, amplexicaulis, 26, bicolor, 148, caesia, 148, 153, canadensis, 651, elongata, 651, humilis, 652, **laevicaulis,** 649, missouriensis, 651, mollis, 8, nana, 650, nemoralis, 153, **polyphylla,** 651, procera, 651, puberula, 150, pulcherrima, 650, radula, 650, **radulina,** 650, Riddellii, 26, rigida, 652, rigida humilis, 652, **rubra,** 649, rugosa, 153, 141, scopulorum, 649, serotina, 153, 650, 651, **serra,** 650, **viscidula,** 651
Sophia, 483, incisa, 556, intermedia, 556, leptophylla, 556, **purpurascens,** 556, **ramosa,** 556
Sorosporium **contortum,** 83, **Eriochloae,** 84
Spathyema foetida, 140, 141, 153
Specularia perfoliata 152, 154
Spermogonium, Importance of the, 113
Sphaeralcea **Crandallii,** 564, **grandiflora,** 565, rivularis, 564, 565
Sphaeria, 554
Sphaeropsis palmarum, 554
Spines of Fouquieria, 45
Spiraea discolor, 559, dumosa, 559
Spirodela polyrhiza, 134, 135, 138
Spirogyra, 135
Stachys palustris, 136, 137, 141, scopulorum, 640, **teucriformis,** 640
Stanleya **glauca,** 409, integrifolia, 409
Staphylea trifolia, 144
Staurastrum crenulatum, 584, dubium, 583, echinatum, 163, Johnsoni, 163, 164, Johnsoni **coloradense,** 163, leptocladum, 164, nanum, 584
Steironema ciliatum, 153
Stellaria longifolia, 153
Sterculia cliffwoodensis, 78
Sterigmatocystis, 295, 300, nigra, 63, 291, 294, 301
Stipa eminens Andersonii, 88, Vaseyi, 87
Stomata of Holacantha, 523
Strilia, 340, cinnamomea, 341, 343
Strobilites inquirendus, 82
Strophostyles angulosa, 152
Studies in the Asclepiadaceae, 157
Studies in Sisyrinchium, 379
Suida **interior,** 572, **stolonifera,** 572, 573, stolonifera **riparia,** 573
Symphoricarpos oreophilus, 247, **tetonensis,** 246
Symplocarpus, 141
Syndesmon thalictroides, 147
Syntherisma sanguinalis, 154, 156, 157
Syntrichopappus Lemmoni, 499
Syringa, 48

Taeniostrobus, 446
Talinum teretifolium, 150

Taraxacum officinale, 152, Taraxacum, 152, 156
Taxilejeunea, 212
Taxodium distichum, 333
Taxonomic importance of the spermogonium, 113
Tetmemorus, 581, Brebissonii turgidus, 582, laevis, 582, minutus, 582
Tetragonotheca helianthoides, 24
Tetraneuris, 462, 508
Teucrium occidentale 640
Thalesia uniflora, 147
Thalictrum dioicum, 145, polygamum, 135, 136, 140, 146, 153
Thaspium aureum, 147, trifoliatum aureum, 147, 153
Thecaphora **Thornberi,** 88
Thelephora, 42
Thuites Hoheneggeri, 71
Thysanella fimbriata, 12
Thysano-Lejeunea, 183
Tiarella cordifolia, 147
Tilletia pulcherrima, 88, **Wilcoxiana,** 88
Torrubia, 612–615, **Bracei,** 614, 615, **Cokeri,** 613, 615, **discolor,** 613, 615, **floridana,** 615, **inermis,** 614, 615, **longifolia,** 614, 615, **obtusata,** 612, 615, opposita, 612, **rufescens,** 613, 615, **suborbiculata,** 613, 615
Touterea **laciniata,** 565, multiflora, 565, **sinuata,** 566, speciosa, 565, 566
Trachylejeunea, 202, 212, 213
Trachyphytum gracile, 566
Tradescantia comata, 20, virginiana, 145, 153
Trametes, 599, benzoina, 607, cinnabarina, 420, ocellata, 610
Tricalycites papyraceus, 81
Tricarpellites striatus, 81
Trichaptum, 608, 609, **trichomallum,** 608
Tricholoma **viscosum,** 178
Trichomanes radicans, 214, rigidum, 214
Trichostema dichotomum, 154
Trientalis americana, 147
Trifolium agrarium, 150, 152, 154, arvense, 156, aureum, 150, hybridum, 152, 158, pratense, 152, 154, 156, procumbens, 152, 154, repens, 154
Trillium erectum, 15
Triodia cuprea, 154
Triosteum perfoliatum, 145
Triticum vulgare, 59
Tsuga canadensis, 149, 150
Two new species of American wild bananas with a revision of the generic name, 397
Typha angustifolia, 140, latifolia, 134, 136, 138, 140

Udotea conglutinata, 94, flabellata, 94, **Flabellum,** 94
Ulmus americana, 143, 155
Ulva pavonia, 423
Uredineae, New species of, 1
Uredo Parnassiae, 3, **superior,** 5
Uromyces, 118, Cayaponiae, 2, **Hellerianus,** 2, **Pavoniae,** 1, Valerianae, 3
Urticastrum divaricatum, 147
Ustilago **calcara,** 85, echinata, 86, Hieronymi, 87, hypoditis, 86, **lycuroides,** 84, **Scolochloae,** 86, strangulans, 87
Uvularia floridana, 21, grandiflora, 147, perfoliata, 15, 147, 153, puberula, 21, sessilifolia, 21, 147

Vaccinium stamineum, 144
Vagnera racemosa, 15, 147, 153
Vail, A. M. Studies in the Asclepiadaceae, 457
Valeriana edulis, 645, **ovata,** 645, purpurascens, 645, septentrionalis, 645, **trachycarpa,** 645
Valerianella chenopodifolia, 146, 153
Vallisneria spiralis, 133
Vegetative reproduction in Odontolejeunea, 191
Veratrum viride, 140, 141, 153
Verbascum Blattaria, 150, 154, 156, Thapsus, 154, 156, 157
Verbena hastata, 157
Vernonia noveboracensis, 141, 153
Veronica americana, 134, officinalis, 154, serpyllifolia, 154
Vesicularia, 311, 317–320, conostega, 318, malachitica, 309, 311, 312, 317
Viburnum, 79, acerifolium, 144, 145, dentatum, 144, 145, Hollickii, 80, **mattewanense,** 80, prunifolium, 144
Vicia faba, 59, 61
Viola, 153, blanda, 147, canina Muhlenbergii, 147, labradorica, 147, Langsdorfii, 2, orbiculata, 2, palmata, 147, pedata, 147, pubescens, 147, rotundifolia, 150, tripartita glaberrima, 16, villosa, 147
Vitis aestivalis, 144, cordifolia, 144, labrusca, 144, riparia, 144, vulpina, 144
Volvox, 135

Washingtonia longistylis, 147
Watterson, A. Effect of chemical irritation on the respiration of fungi, 291
West American smuts, 83
Widdringtonia, 70, 71
Widdringtonites, 70

Wolffia brasiliensis, 134, 138, columbiana, 134, 138
Wyoming, New plants from, 239

Xanthidium antilopeum, 163, armatum, 583, hastiferum, 163, hastiferum Johnsoni **longispinum,** 163, hastiferum **Toweri,** 163
Xanthium glabratum, 156, 157, strumarium, 156
Xanthochrous, 341, 599, tomentosus, 346
Xanthorrhiza apiifolia, 16
Xylaria, 44
Xylometron sanguineum, 421
Xylopilus, 424, crassus, 424

Zea Mays, 59
Zizania aquatica, 136, 138